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PRIORITY

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CORONA-M

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27 JUL 1953 25X1

SUBJECT: PRELIMINARY REPORT OF EVALUATION OF MISSION 9054

1. PERSONNEL FROM SE AND [REDACTED] HAVE PERFORMED AN EVALUATION OF MISSION 9054 ON JUNE 25 AND JUNE 26 AT [REDACTED] WITH THE RESULTS AS DETAILED IN SUBSEQUENT PARAGRAPHS.

2. CORONA MARKING IN AFT CAMERA TAKE IS OBSERVED TO BE USUALLY SEVERE IN FRAMES 4 OR 5 OF ALL PASSES. MARKING DECREASES IN SEVERITY AFTER FRAME 5. INCREASED GROSS FOG LEVEL IN AFT PHOTOGRAPHY MAY INDICATE PERSISTENCE THROUGHOUT ENTIRE PASSES ALTHOUGH THIS COULD NOT BE POSITIVELY DETERMINED DUE TO LACK OF KNOWLEDGE AS TO WHAT LEVEL THE FILM WAS PROCESSED. TO DETERMINE EFFECTS OF THIS PHENOMENA AND TO EVALUATE EXPOSURE, KNOWLEDGE OF PROCESSING LEVELS SHOULD BE MADE AVAILABLE IN THE FUTURE TO THE EVALUATION TEAM. IT IS ESTIMATED THAT APPROXIMATELY 3 PERCENT OF THE AFT CAMERA TAKE SHOULD BE CONSIDERED A TOTAL LOSS DUE TO CORONA. EXACT EXTENT OF INFORMATION LOSS IS BEING EVALUATED BY

Declassification Review by NGA/DoD

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GROUP 1
Excluded from automatic
downgrading and
declassification

[] CORRECTIVE ACTIONS INITIATED BY []

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SHOULD ELIMINATE FUTURE OCCURENCES.

3. MULTIPLE EXPOSURES, FAILURE TO METER, FAILURE OF SHUTTERS, AND SIMILAR PROBLEMS OCCURRING IN STELLAR-INDEX PHOTOGRAPHY ARE MOST PROBABLY CAUSED BY A FAILURE IN THE S/I PROGRAMMER. EXACT CAUSE UNDETERMINED. [] WILL INVESTIAGTE TO DETERMINE CAUSE AND ANY RECOMMENDED FIXES. LESS THAN 20 PERCENT OF TAKE AFFECTED.

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4. WHEN STELLAR CAMERA DID OPERATE, STARS TO 6TH AND 7TH MAGNITUDE WERE RECORDED. BAFFLE AND DOOR USED WERE OF THE OLD CONFIGURATION AND FOGGED AREA APPROXIMATES PREFLIGHT PREDICTIONS.

5. EXPOSURE SETTING OF MAIN CAMERAS IS CONSIDERED TO BE AS NEARLY CORRECT AS POSSIBLE FOR A FIXED SLIT. INDEX CAMERA EXPOSURE APPEARS TO BE GOOD.

6. WESTWARD LOOKING HORIZON CAMERA APPEARS TO BE SEVERELY DEGRADED BY FLARE. REVIEW OF EXTENSIVE TESTS BY [] IN ATTEMPT TO SIMULATE PAST HORIZON CAMERA OUT-OF-FOCUS CONDITIONS REVEALED NO INFORMATION THAT WOULD CONTRIBUTE TO A SOLUTION OF THIS PROBLEM. [] WILL CONTINUE INVESTIGATION.

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7. PRELIMINARY REVIEW OF VEHICLE ATTITUDE REDUCTIONS SHOWS A CONSISTENT PITCH ERROR OF APPROXIMATELY ONE DEGREE (NOSE DOWN). ROLL CONTROL WAS GENERALLY EXCELLENT WITH MAXIMUM EXCURSIONS OF APPROXIMATELY 1 1/2 DEGREES.

8. IT WAS NOTED THAT FREQUENCY RECORDING LIGHT HAD INTRUDED INTO THE MAIN FORMAT. TIGHTENING OF TOLERANCES ON MOUNTING WILL BE ATTEMPTED AS A FIX. USERS ARE ALSO REQUESTED TO CONSIDER WHETHER THE FREQUENCY RECORDING MARKS ARE REQUIRED.

9. PLUS DENSITY STREAKS WHICH DID NOT CAUSE SERIOUS DEGRADATION WERE NOTED. SOME APPEARED TO BE CAUSED BY EMULSION DUST OR DIRT PARTICLES ON EXPOSURE SLIT. [] WILL INVESTIGATE EXPOSURE SLIT DESIGN TO ELIMINATE PARTICLE TRAPPING THAT CAN OCCUR WITH PRESENT DESIGN. INVESTIGATION OF SOURCES OF FOREIGN PARTICLES SHOULD ALSO BE CARRIED ON BY []

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10. NO FOCUS PROBLEMS WERE OBSERVED AND GENERAL LEVEL OF RESOLUTION PERFORMANCE IS ABOVE AVERAGE.

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